

International VDI Conference

AI in Vehicles & Software Engineering

April 01- 02, 2025, Berlin

- AI Technology in Practice – Products & Driver Experience
 - AI Technology in Action – Tools & Methods
 - AI for Organizations – Empowerment, Governance, and Regulatory Aspects
- + **International Best Practices**
 + **Panel Discussion: What's Next for AI in the Automotive Industry?**

Meet international Experts from:





About us



The Association of German Engineers (VDI) is one of the largest technical-scientific associations in Europe. Throughout the years, the VDI has successfully expanded its activities nationally and internationally to foster and impart knowledge about technology-related issues. As a financially independent, politically unaffiliated and non-profit organization the VDI is recognized as the key representative of engineers both within the profession and in public.

Supporting Experts

Jan Zawadzki, CTO, CertifAI GmbH
Johannes Richenhagen, Managing Director, FEV.io GmbH
Cristian Ion, Chief Strategy Officer global, CYMOTIVE Technologies

Reasons to attend

Connect with leading professionals and key decision-makers in the industry and expand your professional network.

Engage in discussions with industry leaders about the latest challenges and solutions in AI and software development.

Listen to first-hand how AI-based technologies are improving vehicle safety and efficiency and learn about the regulatory requirements involved.



Upcoming Events

11th International VDI Conference
Cyber Security for Vehicles
May 21–22, 2025 in Munich

International VDI Conference
Automotive Data Communication
July 1–2, 2025 in Munich

09:00 Registration & welcome coffee

09:55 Chair's welcome and opening address

I. Technology in Practice – Products & Driver Experience

10:00 **The Next Frontier: In-car Multi-Modal LLMs and AI Agents**

- Large Language Models enable unprecedented capabilities for AV systems and in-cabin AI assistants
- While first LLMs are already deployed in-car, Multi-modal models like VLMs as well as agentic AI are making their way into vehicles
- This session will explain which benefits these models demonstrate, how they can be deployed in-car, and how to build applications on top of them

Felix Friedmann, Engineering Lead AI for DriveOS, NVIDIA, Germany

10:30 **The Current State of Deploying LLMs and Other Gen AI to Edge Devices**

- What is Gen AI and what will it be used for in embedded devices and in automotive?
- Embedded hardware that meets the requirements to run Gen AI
- Trade-offs between model size, accuracy, latency, and energy efficiency

MSc, Peter Kristiansen, Head of Business Development, co-author: PhD, Andreas Ask, both: Embedd, Sweden

11:00 **How Small Language Models Shape Smooth Vehicle User Experience - Today**

- Small Language Models (SLM) for minimum latency, privacy, reliability and cost efficiency
- SLM integration into series vehicles with SDV architecture
- Implementation for reconfigurable dashboard feature

Alexander Kugler, Lead Solution Manager Infotainment & Connected Mobility, FEV.io GmbH, Germany

11:30 ☕ Networking & coffee break

12:00 **Smart Trailers, Smarter Drivers: AI-Powered Insights into Driving Styles**

- Influence of driving style in the context of trailers and maintenance
- Behavior analysis using telemetry data
- Machine Learning Techniques for behavior analysis
- Integration with digital twin solutions

Ing. Laura Gregorc, MSc, Automotive Data Science / Researcher, Virtual Vehicle Research GmbH, Austria

12:30 **AI-Driven Interior-Morphing**

- Fully automated vehicles allow for new vehicle interiors and cooperative human-machine interactions
- We present an adaptive vehicle interior concept with AI assistant for mobile work and leisure activities
- AI assistant gradually learns user preferences for a situation-dependent vehicle interior

Patrick Vaudrevange, Senior Principal Data Analytics & AI, co-authors Frank Beutenmüller & Raghav Nath, all TWT GmbH Science & Innovation, Germany

13:00 🍷 Lunch

II. AI Technology in Action – Tools & Methods (Part 1)

14:30 **Building a Globally Connected High-Performance AI Infrastructure**

- Connect and optimize all your AI data
- How to optimize and improve performance for large scale AI workloads
- Learn how organizations today are retooling their IT operations to embrace artificial intelligence (AI), machine learning (ML), and advanced analytics

Frank Kraemer, Systems Architect, IBM, Germany

15:00 **Unleashing AI's Potential: Key Leverage Points for Achieving Maximum Testing Efficiency**

- Identifying the optimal use cases for AI in testing
- The good, the bad, and the ugly of AI in testing
- Success stories of AI in automotive testing

Robert Fey, Product Management, Synopsys, Germany

15:30 **Enablers for AI and Machine Learning in Vehicle Safety Engineering**

- Specific requirements for data and models in engineering
- Data- & knowledge-engineering
- Use cases

Dr.-Ing. Michael Dlugosch, Head of Business Unit Automotive, Fraunhofer-Institute for High-Speed Dynamics, EMI, Germany

16:00 ☕ Networking & coffee break

16:45 **Agentic AI Assistants for Automotive Data Analysis**

- Engineering data analysis is difficult because of data silos (different data formats, poor data catalogues, many subsystems / signals)
- We show how LLM-based assistants can be used to contextualize data, query data and visualize results
- Concrete applications from testing and fleet data analysis
- Best practices how to integrate AI assistants into existing platforms & tools

Dr. Stefan Suwelack, CEO and Co-Founder Renumics, Germany

17:15 **HW/SW Co-Design Toolbox: Towards Efficient AI ADAS**

- AI ADAS workload scaling.
- Memory bottleneck
- HW-aware Optimizations
- HW/SW codesign and future trends.

Dr. Ing. Taha Soliman, Research Project Lead and Expert, Robert Bosch GmbH, Germany

17:30 End of conference Day One

18:00 👥 **Get-together**



At the end of the first conference day, we kindly invite you to use the relaxed and informal atmosphere at our conference dinner for in-depth conversations with other participants and speakers.

09:25 Chair's welcome

III. AI Technology in Action – Tools & Methods (Part 2)**09:30 Safe AI for Automated Vehicles**

- RUST
- Real-time perception
- Safe AI

Dr. Jürgen Hess, VP Engineering, Spleenlab GmbH, Germany

10:00 Improving the Automotive Systems Development Process with AI

- Supporting requirements engineering with AI
- AI enhanced systems and software architecture management
- Applying AI for specifying system behavior
- AI and testing

Andreas Graf, Head of AI and Dataspaces, co-authors: Sruthi Radhakrishnan & Ario Giancarlo Cecchetti, all: itemis AG, Germany

10:30 With AI Against AI to Increase Cybersecurity

- Generative AI CSMS-Framework for monitoring and defending against cyber attacks
- Malicious Generative AI to generate new unknown attack vectors
- Up to date and one step ahead against cyber attacks with GenAI

Dr.-Ing. Ugur Akcakoca, Head of Department ES² - Embedded Safety & Security, EDAG Engineering GmbH, Germany

11:00 ☕ Networking & coffee break

11:45 Boosting Software Testing Efficiency with AI and Natural Language

- Challenges in software testing: High effort in creating and maintaining test cases and integrating them into existing workflows
- How AI can help: Leveraging natural language and generative AI to automate and streamline testing processes
- ZenTestAI in action: A solution combining intuitive language inputs with automated test execution to make quality assurance more user-friendly and efficient

Dragan Sunjka, Lead IT Consultant, msg for automotive gmbh, Germany

Panel Discussion**12:15 What's Next for AI in the Automotive Industry?**

Nick Westphal, Digital Transformation Owner - Head of AI, EDAG Engineering GmbH

Florian Sauerbeck, Sr. Software Engineer, driveblocks GmbH

Robert Fey, Product Management, Synopsys

13:00 🍴 Lunch

IV. AI for Organizations – Empowerment, Governance, and Regulatory Aspects**14:00 Navigating the Global Regulatory Landscape for AI in Autonomous Vehicles**

- Heterogeneous regulatory landscape
- Relevance of global standards
- Lifecycle compliance

Christian Pahlke, Head of Strategic Initiatives AI and Cybersecurity, TÜV Süd, Germany

14:30 AI Running Fast, Can Regulations Cope with It?

- Identifying current relevant AI regulations
- Application of AI regulations to the automotive sector
- Cybersecurity and new AI regulation

Javier Mendoza, Team Lead Security Analyses and Concepts, AVL Software and Functions GmbH, Germany

15:00 Closing Remarks

15:15 End of conference

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Jasmin Habel
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Please submit your topic to:
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Conference venue
NH Berlin Alexanderplatz
Landsberger Allee 26-32
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Hotel room reservation: A limited number of rooms has been reserved for the benefit of the conference participants at the NH Berlin Alexanderplatz. Please refer to "VDI Conference". For more hotels: www.vdi-wissensforum.de/hrs

VDI Wissensforum service package: The conference package includes conference documents (online), beverages during breaks, lunch and the get-together on April 1, 2025.

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Registration

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Yes, I will participate as follows:

Participation Fee + VAT

VDI Conference 01.-02.04.2025
(01K0139025) € 1990

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